Decision **DRAFT DECISION OF ALJ TERKEURST (Mailed June 21, 2005)**

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Investigation into Implementation of Assembly Bill 970 Regarding the Identification of Electric Transmission and Distribution Constraints, Actions to Resolve Those Constraints, and Related Matters Affecting the Reliability of Electric Supply.	Investigation 00-11-001 (Filed November 2, 2000)

INTERIM OPINION REGARDING TRANSMISSION COSTS IN RPS PROCUREMENT

I. Summary

This decision addresses the development of transmission costs for use in Renewables Portfolio Standard (RPS) procurements to be undertaken in 2005 pursuant to Pub. Util. Code § 399.14.[1] This will be the second procurement under the RPS program.

We require that Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) each prepare and file within 14 days from the effective date of this order a 2005 Transmission Ranking Cost Report for use in its upcoming RPS procurement. In preparing their 2005 reports, the companies should use the methodology adopted in Decision (D.) 04-06-013 for the first Transmission

[1] All statutory references are to the Public Utilities Code.

Ranking Cost Reports, except to the extent modified in this order. The 2005 Transmission Ranking Cost Reports will be subject to approval by the Assigned Commissioner.

As in 2004, the 2005 Transmission Ranking Cost Reports will identify and provide cost information regarding transmission upgrades needed for potential RPS projects. RPS bidders will be able to use the information regarding expected transmission upgrades in developing their bids in response to the 2005 RPS procurement solicitation. In evaluating the responses, the utilities should use the transmission cost estimates in their 2005 Transmission Ranking Cost Reports and the ranking methodology approved in D.04-06-013.

We will address the extent to which bidders may propose to deliver energy outside the purchasing utility's service territory in an order in Rulemaking (R.) 04-04-026 regarding the utilities' 2005 RPS procurement plans rather than in this order in Investigation (I.) 00-11-001. For RPS procurements subsequent to 2005, the Commission will address the treatment of transmission costs on an integrated basis with other RPS issues.[2] In addition to this transfer of transmission issues related to RPS procurement, we plan to address the remaining areas of inquiry pending in I.00-11-001 through separate orders and to close this proceeding in the near future.

II. Background

In the RPS program, as adopted in Senate Bill (SB) 1078 in 2002, transmission costs are considered in the rank ordering and selection of least-cost

[2] At the appropriate time, the Commission will provide further direction on where these issues will be addressed.

and best-fit renewable resources. In D.04-06-013, the Commission adopted a methodology for development and consideration of transmission costs in the initial RPS procurement, which can be summarized as follows:

1. Prior to the RPS bid solicitation, the utilities request information from potential bidders regarding their project technology, location, size, and output profile.

2. Each utility groups potential RPS bidders into clusters based on the substation(s) and bus(es) to which the identified renewable resources most likely would interconnect. The utility then uses the Commission-approved methodology to identify network upgrades that may be needed for each cluster. Where available, CAISO System Impact Studies and Facility Studies, which the CAISO requires for each new generator before the project can be interconnected to the grid, are used. The utility performs conceptual studies to estimate other transmission costs using the approved methodology.

3. Each utility files its transmission cost estimates in a Transmission Ranking Cost Report, which is then subject to comment and approval. These reports, provided to each bidder in advance of bidding, provide developers with important information regarding the transmission costs that may be associated with a bid when it is evaluated by the utility. This up-front identification of transmission expenses and constraints may help developers select optimal locations to site generation.

4. Utilities then use the information in the Transmission Ranking Cost Reports and a Commission-approved ranking methodology to evaluate and rank bids according to the statutory least-cost and best-fit criteria.

In D.04-06-013, we required that PG&E, SCE, and SDG&E each file a Transmission Ranking Cost Report consistent with the adopted methodology.

Following the receipt of comments, the 2004 Transmission Ranking Cost Reports were approved by an Assigned Commissioner ruling.

A prehearing conference (PHC) was held on October 1, 2004 regarding possible refinements of the transmission cost methodology adopted in D.04-06-013. Consistent with PHC discussions, Commission staff held a workshop on January 20-21, 2005, to address areas of dispute regarding the use of transmission costs in future RPS procurements. PG&E, SCE, SDG&E, the California Independent System Operator (CAISO), the California Wind Energy Association (CalWEA), the Center for Energy Efficiency and Renewable Technologies (CEERT), and The Utility Reform Network (TURN) filed comments and / or reply comments on the staff's workshop report.

On May 27, 2005, the assigned Administrative Law Judge (ALJ) issued a ruling requiring that PG&E, SCE, and SDG&E each request information from potential bidders in the planned 2005 RPS solicitation regarding their proposed projects' interconnection requirements. The ALJ also required that the utilities undertake conceptual transmission studies based on developers' responses, as needed, in order to allow development of Transmission Ranking Cost Reports for the 2005 RPS procurement.

III. Methodology for Identification of Transmission Costs

In this section, we address certain contested issues regarding development of transmission costs for use during the 2005 RPS procurement. No party contested the methodology adopted in D.04-06-013 for treating transmission costs during the rank ordering process, and we affirm that the utilities should continue to use that methodology in ranking bids received in response to the 2005 RPS procurement.

A. Transmission Costs to Be Included in the Transmission Ranking Cost Reports

At the workshop, parties debated the transmission costs that should be included in Transmission Ranking Cost Reports. Parties disagree regarding whether preferential treatment of renewable resources in the "loading order" adopted in the Energy Action Plan should be mirrored in the assessment of transmission costs used in RPS evaluations.

CEERT does not believe that costs of transmission upgrades should be assigned automatically to RPS projects. In CEERT's view, the Transmission Ranking Cost Reports should reflect that renewables will be allowed to compete for existing transmission capacity under the CAISO's open access policies. CEERT reports that a new proposed CAISO tariff, if approved by the Federal Energy Regulatory Commission (FERC), would auction off intertie capacity each day and that such capacity would go to generators with the lowest variable cost. Noting that renewables typically have low variable costs, CEERT maintains that the Transmission Ranking Cost Reports should reflect that existing transmission capacity under discretionary CAISO scheduling authority may be allocated to new renewable resources.

The utilities assert to the contrary that the Transmission Ranking Cost Report methodology should mirror CAISO interconnection processes as closely as possible. In their view, the RPS transmission study results must be consistent with FERC interconnection processes and CAISO and utility interconnection tariffs in order to provide a reasonable proxy of transmission costs for bid ranking purposes. PG&E argues that the loading order in the Energy Action Plan relates only to the preferred order of resource procurement and has nothing to do with how the CAISO determines the network upgrades needed for

interconnection of new generation to the grid. As a result, PG&E argues, the Energy Action Plan loading order is irrelevant for the identification of transmission costs of RPS projects.

Our determination of what transmission costs should be included in consideration of RPS bids is based on the statutory requirements. Section 399.14(a)(2)(B) requires that the RPS rank ordering and selection process "consider estimates of indirect costs associated with needed transmission investments and ongoing utility expenses resulting from integrating and operating eligible renewable energy resources." This requirement, as part of the least-cost and best-fit selection mandate for RPS procurement, leads us to conclude that, as a general principle, the identification of transmission costs for use in the bid ranking process should reflect the actual net change in total transmission costs due to a project's interconnection and operation, to the extent practicable.

This principle guides us in assessing both CEERT's position that transmission adders should reflect that existing transmission capacity may be allocated operationally to new renewable resources and the utilities' position that the full costs of upgrades identified under federal interconnection policies must be used for bid ranking purposes. Neither view is entirely consistent with the statutory principle of cost minimization.

First, there is no basis in SB 1078 for linking the RPS bid ranking process to federal policies or CAISO practices regarding transmission system operations. Consistent with the least-cost mandate in § 399.14(a)(2)(B), needed transmission upgrades should be considered in ranking an RPS bid, regardless of how the transmission system may be operated and transmission capacity allocated after the upgrade is built, and regardless of which entity funds the upgrade. We note

additionally that federal policies regarding both transmission system operation and generation interconnection are in flux, and attempts to mirror changing federal policies could inject harmful instability in the State's RPS program.

We agree with the utilities that the CAISO System Impact Studies and Facility Studies, if they have been undertaken for a project, will provide valuable information in developing the Transmission Ranking Cost Reports and in the bid ranking process. Such study results are likely to be a good starting point and, indeed, may be adequate in many cases. However, adjustment to CAISO study results for bid ranking purposes may be warranted, as contemplated in D.04-06-013, if interconnection and operation of the renewable project reduces transmission costs in other respects, to the extent such benefits may be quantified. Adjustments may also be appropriate if, for example, renewable generation will replace planned non-renewable energy flows in a manner that reduces the need for transmission upgrades.[3] While the utilities may continue to use System Impact Studies and Facility Studies in their 2005 Transmission Ranking Cost Reports, we will revisit the continued reasonableness of this practice in future years.

As established in D.04-06-013, the utilities should consider any identified network benefits as offsets to needed transmission upgrade costs to the extent

[3] In its interconnection studies, which are project-specific, the CAISO assumes that existing generation will continue to operate as planned and that operation of the new project under consideration will increase transmission loadings rather than replace output from other generation. While this may be a reasonable approximation for a single new project, with the cumulative addition of enough renewable projects to meet RPS goals, this approach may identify a need for transmission upgrades incorrectly in some instances.

practicable. We note with interest the workshop presentation by the California Energy Commission's (CEC) Public Interest Energy Research (PIER) group describing its current efforts to identify locations where the addition of renewable resources would be beneficial to the transmission system. The CEC's PIER group posits that, at least in theory, addition of generation at identified spots could provide sufficient system benefits to outweigh the cost of network upgrades needed to interconnect the project. When available, PIER results may allow identification and quantification of network benefits of renewable projects and related transmission upgrades. As discussed in D.04-06-013, efforts initiated in this proceeding to develop a generic methodology for assessment of the economic benefits of transmission projects may also be useful in this regard.

We recognize that transmission upgrades related to RPS projects may provide system benefits other than transmission cost reductions, e.g., if an upgrade increases the transfer capability and allows a reduction in the cost of needed non-renewable energy purchases. We would expect such beneficial results, if identified and quantified, to be incorporated into the least-cost and best-fit analysis of RPS projects, e.g., in integration and operating costs, as appropriate.

B. Curtailability

In D.04-06-013, we provided that RPS bidders may propose curtailability as an alternative to transmission upgrades. The utilities must evaluate bids for projects that demonstrate reliable curtailability through System Impact Studies and Facility Studies, and may use judgment in evaluating bids that propose curtailability without such studies. (D.04-06-013, mimeo. at 21-22.)

The staff's workshop report recommended that the Commission consider adopting a curtailability standard "on the order of 5-10%" as a means to further

RPS goals while minimizing transmission expenses and limiting utility exposure to penalties for under-procurement. We do not have a sufficient record to establish how a numerical curtailability standard could be crafted and implemented in a manner consistent with the least-cost and best-fit standard for RPS projects. We may revisit this issue in the future after additional experience with RPS procurement is gained.

C. Dynamic Line Ratings

Through the use of dynamic line ratings, the conditions of transmission lines can be determined "in real time" and power flows can be managed in a more efficient manner. In D.04-06-013, we found it inappropriate to assume for purposes of evaluating the first RPS bids that the use of dynamic line ratings would reduce the need for transmission upgrades. We recognized, however, that dynamic line rating technology is evolving and we left open the possibility that future RPS bid evaluations may reasonably reflect the effect of dynamic line ratings.

The use of dynamic line ratings was discussed during the workshop. We remain unconvinced that this technology has advanced such that its use would allow transmission upgrades to be delayed or avoided. We will continue to monitor the development of dynamic line rating technologies.

D. Coincident Generation

In D.04-06-013, we noted CalWEA's position that the sizing of transmission facilities should take into account that maximum coincident generation from clusters of wind generation will be materially less than nameplate generation. We found insufficient information to determine whether or the manner in which the coincidence of wind generation should be reflected in planning transmission upgrades for wind generation.

At the workshop, parties reported that pending CEC-sponsored wind studies may provide useful information regarding the coincidence of wind generation. Such information may appropriately be reflected in future Transmission Ranking Cost Reports. However, lacking completed studies, we do not modify the Transmission Ranking Cost Report process at this time in this regard.

E. Form of Transmission Costs in the Transmission Ranking Cost Reports

During the workshop, CEERT asked that the utilities be required to make carrying costs clear in their Transmission Ranking Cost Reports and also that the utilities be required to transform transmission costs into a cents-per-kilowatthour transmission cost adder. SCE responded that such calculations are performed only after bids are received.

As noted in D.04-06-013, the appropriate form of the transmission cost estimate used in assessing a bid, i.e., total cost, per-megawatt cost, or per-kilowatthour cost, may depend on the form of the bid. The costs allocated to a particular project may also depend on whether other bids are accepted in the same area. As a result, development of a single per-kilowatthour transmission cost adder for an identified transmission upgrade is not appropriate. It is reasonable, however, to require that the utilities specify and explain the carrying costs, in addition to capital costs, of transmission upgrades identified in their Transmission Ranking Cost Reports. We adopt this requirement.

F. Consideration of Costs of Large Transmission Upgrades

In D.03-06-071 and D.04-06-013, we provided that during their initial RPS procurement the utilities would consider the entire cost of a transmission upgrade in ranking the projects that would use the upgrade. In D.04-06-013, we expressed concerns with this approach:

> We are concerned, in particular, that allocating the entire cost of a large transmission upgrade to the projects that have bid in response to one year's procurement solicitation does not take into account that, in some areas, the most cost-effective transmission upgrade may be large enough to accommodate more than one year's bidders. Considering the entire cost in assessing one year's bids may make it difficult for such projects to ever win the bid or for the needed transmission upgrade to be built. (D.04-06-013, mimeo. at 35-36.)

In D.04-06-010 issued contemporaneously with D.04-06-013, we instructed the Tehachapi study group to examine the use of triggers for the construction of phased transmission upgrades in that region. Recognizing the potential development of construction triggers, we stated in D.04-06-013 that:

> [I]t may be desirable to reflect costs of a large transmission upgrade on a pro rata basis in the rank ordering of individual bids if a trigger mechanism has been adopted for construction of the transmission upgrade and sufficient bids have been received to initiate construction of the upgrade consistent with the trigger mechanism. We plan to explore whether these or other approaches could be adopted to improve the application of transmission cost adders in areas with large renewable resource potential. (*Id.*, at 36.)

The first phases of transmission upgrades in the Tehachapi region are currently being considered in Application (A.) 04-12-007 and A.04-12-008. As specified in the scoping memo for A.04-12-007, that proceeding will consider adoption of a trigger mechanism whereby approval or construction of each phase of the Tehachapi upgrades could be triggered. The record to be developed in A.04-12-007 on this issue may assist our consideration of how to treat the cost of Tehachapi upgrades in assessment of RPS bids from that region. In the meantime, we do not modify for 2005 the previously adopted policy that the

entire cost of a transmission upgrade be considered in ranking the projects that would use the upgrade.

IV. Preparation of the Transmission Ranking Cost Reports

The May 27, 2005 ALJ ruling required that the utilities request information from potential bidders regarding their proposed projects' interconnection requirements and that the utilities undertake conceptual transmission studies, if needed, based on developers' responses. We expect that the utilities have complied with this ruling and have completed their conceptual studies. We require that the utilities prepare and file their 2005 Transmission Ranking Cost Reports within 14 days from the effective date of this order.

We adopt the same procedures for review of the 2005 Transmission Ranking Cost Reports that were used in 2004 pursuant to D.04-06-013. Initial comments on the 2005 Transmission Ranking Cost Reports may be filed within seven days of the due date for the reports and reply comments may be filed within seven days thereafter.

Parties should serve paper format copies, in addition to electronic copies, if served as allowed by Rule 2.3.1 of the Commission Rules of Practice and Procedure, of the 2005 Transmission Ranking Cost Reports, initial comments, and reply comments on the Assigned Commissioner and the assigned ALJ.

The Commission will assess the adequacy of the reports on the basis of the filed comments and reply comments, and will determine whether additional steps are warranted before the utilities' results are used in ranking bids for the 2005 RPS procurement. As in 2004, we delegate this responsibility to the Assigned Commissioner in this proceeding, so that the bid ranking process is not delayed by the time that would be necessary to bring disputes to the full Commission for formal action on its public agenda.

V. Comments on Draft Decision

The draft decision of the assigned ALJ was mailed to the parties in this proceeding in accordance with Section 311(g)(1) and Rule 77.7 of the Rules of Practice and Procedure. Comments and / or reply comments were filed by __.

VI. Assignment of Proceeding

Michael R. Peevey is the Assigned Commissioner and Charlotte F. TerKeurst is the assigned ALJ in this proceeding.

Findings of Fact

1. For 2005 RPS procurements, it is reasonable to require that PG&E, SCE, and SDG&E use the methodology adopted in D.04-06-013 for their Transmission Ranking Cost Reports and for evaluating and ranking RPS bids, except to the extent modified in this order or in an order in R.04-04-026 regarding the utilities' 2005 RPS procurement plans.

2. It is reasonable to require that the identification of transmission costs for use in the RPS bid ranking process reflect the actual net change in total transmission costs due to a project's interconnection and operation, to the extent practicable.

3. It is reasonable to require that the utilities specify and explain the carrying costs, in addition to capital costs, of transmission upgrades identified in their Transmission Ranking Cost Reports.

4. It is reasonable to require the utilities to prepare and file their Transmission Ranking Cost Reports within 14 days of the effective date of this order.

5. It is reasonable to delegate to the Assigned Commissioner in I.00-11-001 the assessment of the adequacy of the 2005 Transmission Ranking Cost Reports required by this order, so that the bid ranking process is not delayed.

6. It is reasonable to use the methodology adopted in D.04-06-013 for the development and consideration of transmission costs in the 2005 RPS procurement, with the modifications adopted in this order.

Conclusions of Law

1. There is no basis in SB 1078 for linking the RPS bid ranking process to federal policies or CAISO practices regarding transmission system operations.

2. Consistent with the least-cost mandate in § 399.14(a)(2)(B), transmission upgrades needed to maintain system reliability should be considered in ranking an RPS bid, regardless of how the transmission system may be operated and transmission capacity allocated after the upgrade is built, and regardless of which entity funds the upgrade.

3. The responsibility to assess the adequacy of the Transmission Ranking Cost Reports should be delegated to the Assigned Commissioner in I.00-11-001.

4. The Methodology for Development and Consideration of Transmission Costs in Initial Renewable Portfolio Standard Procurement appended as Attachment A to D.04-06-013 should be adopted for use in the 2005 RPS procurements, except to the extent modified by this order or by other Commission order.

5. In order to proceed expeditiously with the 2005 RPS procurement, this decision should be effective today.

INTERIM ORDER

IT IS ORDERED that:

1. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) shall each use the Methodology for Development and Consideration of Transmission Costs in Initial Renewable Portfolio Standard Procurement appended as Attachment A to Decision (D.) 04-06-013 in its 2005 Renewable Portfolio Standard (RPS) procurement, except to the extent modified by this order or by other Commission order.

2. In their 2005 Transmission Cost Ranking Reports, PG&E, SCE, and SDG&E shall each specify and explain the carrying costs, in addition to capital costs, of transmission upgrades identified in the reports.

3. PG&E, SCE, and SCE shall each prepare and file a 2005 Transmission Ranking Cost Report consistent with Ordering Paragraphs 1 and 2 within 14 days of the effective date of this order. Each company's 2005 Transmission Ranking Cost Report shall reflect data regarding potential renewable energy bidders obtained through the requests for information required by the May 27, 2005 ruling of the assigned Administrative Law Judge (ALJ) in addition to previously obtained information regarding potential renewable energy bidders.

4. Parties may file initial comments on the 2005 Transmission Ranking Cost Reports within seven days of the due date for the reports and may file reply comments within seven days thereafter.

5. Parties shall serve paper format copies, in addition to electronic copies, if served as allowed by Rule 2.3.1 of the Commission Rules of Practice and

Procedure, of the 2005 Transmission Ranking Cost Reports, initial comments, and reply comments on the Assigned Commissioner and ALJ.

6. The Assigned Commissioner in Investigation 00-11-001 shall assess the adequacy of the 2005 Transmission Ranking Cost Reports on the basis of the filed comments and reply comments, and shall determine whether the reports should be modified or other steps taken before the utilities' results are used in ranking bids for the 2005 RPS procurement.

7. The Executive Director shall serve a copy of this decision on parties to Rulemaking 04-04-026.

This order is effective today.

Dated _____, at San Francisco, California.